

Applicants' representative submitted, and the Examiner acknowledged, that "neither reference discusses intumescent material." (See Interview Summary).

Nozaki appears to only disclose a flame retardant for mesh sheets and nowhere includes the word intumescent or discloses, teaches, or suggests, wherein the coating, or the material being coated swells and chars when exposed to flame and forms an insulating fire-retardant barrier between the flame and material, i.e., exhibiting intumescent qualities. Marx, while disclosing flame resistant foam, appears to only disclose the foam as part of a polyurethane composition, not as a result of a charring process.

2. The combined disclosures of Nozaki and Marx do not teach or suggest all of Applicants' claim limitations. Claim 1 recites wherein "a substantially transparent coating mass applied to a surface of the polymer material." (Emphasis added). Nowhere does the applied art disclose, teach, or suggest, at least this feature.

Notwithstanding the lack of explicit or implicit disclosure of all claimed elements in the combined disclosure of Nozaki and Marx, the combination or modification of references can not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. Applicants respectfully disagree with the assertion made in the Office Action that "[w]hile the reference does not require the coating to be transparent, it would have been obvious to a person having ordinary skill in the art to do so in order to be able to view the underlying substrate."

The Office Action appears to indicate that a transparent coating is an obvious matter of an engineering design choice. The Board of Patent Appeals and Interferences has made clear, however, that the bare assertion that the modification of the prior art would have been an obvious matter of engineering design choice is insufficient to establish a prima facie case of obviousness because this assertion is a conclusion not a reason. *Ex parte Garrett*, 1986 Pat. App. LEXIS 8 (Bd. Pat. App. and Inter. 1986).

The coating as disclosed by Nozaki relates to a flameproof mesh sheet used outdoors such as at a construction site, and in particular to flameproof mesh sheets capable of being used for a long time. Listed uses include construction of buildings having both a large and relatively small number of stories. Applicant respectfully submits that the Office Action fails to explain why it would be obvious to provide outdoor construction material with a transparent coating.

Applicants further submit that the flame retardant coating of Nozaki is inherently non-transparent by virtue of its composition, and that the feature of transparency is achieved essentially through two measures that differentiate the Applicants' transparent coating from the flame retardant disclosed by Nozaki.

First, unlike Nozaki, which discloses, at column 5, lines 65-67, a film made from a mixture of carbon and condensation phosphoric acid formed on the surface of the resin, the Applicants' coating mass does not include a carbon-donor component that usually leads to a non-transparency of the intumescent mass.

Second, Nozaki discloses, at column 4, lines 65-67, that the addition of red phosphors leads to a strong red color. Applicants further submit that it is well known in the art that red phosphors do not dissolve in water and requires the use of micro-encapsulated red phosphors in order to create an aqueous dispersion containing red phosphors. Such micro-encapsulated red phosphors are disclosed by Nozaki at column 5, lines 1-5. Nozaki further discloses, at column 5, lines 33-41, that the concentration of phosphorous contained in an ammonium polyphosphate compound is preferably 15 to 35% and the average diameter of the compound is preferably 5 to 40  $\mu\text{m}$ .

Thus, one of ordinary skill in the art would be aware that a resin dispersion containing "red phosphorous in an amount of 1.5 to 15 parts by weight and an ammonium polyphosphate compound in an amount of 10 to 70 parts by weight on 100 parts by weight of the solid content of said aqueous dispersion," as recited in Nozaki's claim 1, cannot be transparent because of the high content of solid particles contained therein. Applicants therefore submit that Nozaki teaches away from Applicants' transparent coating mass.

3. The grounds of rejection constitute an improper reconstruction of Applicants' claimed invention. The Office Action indicates that the addition of "an isocyanate or a melamine-formaldehyde," to the coating, as recited in claim 1, would have been obvious based on the combination of Nozaki and Marx. Applicants respectfully disagree. As submitted and acknowledged by Examiner Morris at the time of the personal interview, the Office Action appears, at the bottom of page 3 and the top of page four, to recite a motivation found only in Applicants specification.

Specifically, at page 6, lines 21-23, of the specification, the Applicants disclose wherein: "[t]he generation of a flame retarding carbon foam is particularly due to the addition of the

isocyanate or a melamine-formaldehyde acting as the cross-linking agent. When thermoplastic organic fibers are used, further cross-linking is achieved when the fibers are softened under the effects of the heat.” The Office Action indicates that “[i]t would have been obvious to a person having ordinary skill in the art at the time the invention was made to add melamine formaldehyde of Marx et al. into the coating composition of Nozaki et al. motivated to act as a crosslinking agent as well as to allow the polyurethane to soften when heated.” Applicants respectfully disagree.

Nowhere does Marx disclose adding melamine-formaldehyde as a cross-linking agent, let alone removing melamine from the polymer to allow the fibers to soften under the effects of heat. Marx, at column 7, lines 45-48, appears to only disclose the use of melamine as a flame retardant and not as a cross-linking agent, as recited in claim 1. The Office Action not only appears to use improper hindsight reconstruction to pick and choose among isolated disclosures, the Office Action appears to recite a motivation found only in the Applicants’ specification. Accordingly, it is respectfully submitted that the combination is improper.

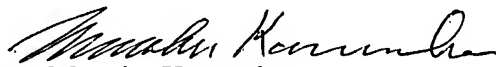
## **Conclusion**

Applicants respectfully submit that independent claim 1 is patentable not only due to the failure of Nozaki in view of Marx to disclose, teach or motivate all recited features of the claims, but are also patentable based upon the improper combination of Nozaki and Marx. Claims 2-9 and 14-16 depend from independent claim 1 and are likewise patentable over the applied art for at least their dependence on claim 1, an allowable base claim, as well as for the additional features they recite. Accordingly, withdrawal of this rejection is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-9 and 14-16 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Manabu Kanesaka', written in a cursive style.

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